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2 **Repair of Damage to Bridge Decks due to Surfacing Removal Operations**

3 All bridge deck concrete, bridge pavement seat, bridge deck steel reinforcing bar,
4 and bridge deck waterproofing membrane (when specified to remain), damage due
5 to the Contractor's surfacing removal operations shall be repaired by the Contractor
6 in accordance with Section 1-07.13, except that damaged steel reinforcing bars at
7 depths less than 0.02 feet below the maximum surfacing removal depth as
8 specified by the Engineer shall be considered bridge deck repair in accordance with
9 Section 6-02.3(10)D as supplemented in these Special Provisions.

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11 Damage to existing concrete is defined as an area of concrete removed to depths
12 equal to or greater than 0.02 feet below the maximum depth of surfacing removal
13 specified by the Engineer. A single line of removed concrete, caused by one or
14 more extended teeth on a rotary milling machine milling head shall be measured as
15 one square foot of damage per foot of line removal. The Contractor shall mitigate
16 the damaged concrete by the following method:

17
18 Damaged areas of concrete shall be repaired by removing the concrete to a
19 depth 3/4 inches around the top steel reinforcing bar and placing bridge deck
20 repair material approved by the Engineer to the maximum surfacing removal
21 depth specified by the Engineer and parallel to the final grade paving profile.

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23 Damage to existing steel reinforcing bar is defined as mill head contact with bars at
24 surfacing removal depths equal to or greater than 0.02 feet below the maximum
25 depth of surfacing removal specified by the Engineer. Damaged steel reinforcing
26 bar shall be repaired as follows:

- 27
28 1. Damage to epoxy coating, when present on existing steel reinforcing bars,
29 shall be repaired in accordance with Section 6-02.3(24)H.
30
31 2. Damage to steel reinforcing bar resulting in a section loss less than 20
32 percent of the bar with no damage to the surrounding concrete shall be
33 left in place and shall be repaired by removing the concrete to a depth 3/4
34 inches around the top steel reinforcing bar and placing bridge deck repair
35 material approved by the Engineer to the maximum surfacing removal
36 depth specified by the Engineer and parallel to the final grade paving
37 profile.
38
39 3. Damage to steel reinforcing bar resulting in a section loss of 20 percent or
40 more in one location, bars partially or completely removed from the bridge
41 deck, or where there is a lack of bond to the concrete, shall be repaired by
42 removing the adjacent concrete and splicing a new bar of the same size.
43 Concrete shall be removed to provide a 3/4 inch minimum clearance
44 around the bars. The splice bars shall extend a minimum of 40 bar
45 diameters beyond each end of the damage.
46

47 Damaged waterproofing membrane is defined as cut or ruptured membrane at
48 surfacing removal depths equal to or greater than 0.02 feet below the maximum
49 depth of surfacing removal specified by the Engineer. Damaged waterproofing
50 membranes shall be repaired by removing the surfacing by hand methods to
51 provide an area at least six inches wider than the rupture in all directions. The

- 1 ruptured area shall be sealed with an approved primer and membrane with at least
- 2 six inches of overlap with the existing membrane.